APPLIED MATHEMATICS AND COMPUTATION

VOLUME 45

AFAF A. S. ZAGHROUT
Stability and Persistence of Facultative Mutualism with Populations Interacting in a Food Chain 1

ZHANG FEI AND LUIS VÁZQUEZ
Two Energy Conserving Numerical Schemes for the Sine-Gordon Equation 17

I. KROHN, S. MOLTZAHN, J. ROSENMÜLLER, P. SUDHÖLTER, AND H.-M. WALLMEIER
Implementing the Modified LH Algorithm 31

RICHARD L. PATTERSON
Regression Approximations for Continuous-Time, Stochastic Compartmental Models of Discrete Interacting Populations 73

JOHN L. CASTI
Foreword
Bob Kalaba: Teacher, Colleague, and Friend 85

LEIGH TESFATSION
Introduction 89

HARRIET H. KAGIWADA
Best Wishes to Bob on His 65th Birthday 91

HARRIET H. KAGIWADA
Kalaba's Work in Applied Mathematics: Modeling, Optimization, and Inverse Problems 93

ANDREW P. SAGE
Invariant Imbedding in Control, Estimation, and System Identification 99

LEIGH TESFATSION
Work by Robert Kalaba on Automated Sensitivity Analysis 121

Harriet H. Kagiwada, Julia K. Kagiwada, and Sueo Ueno
Kalaba's Associative Memories for System Identification 135

Alan Schumitzky
Nonparametric EM Algorithms for Estimating
Prior Distributions 143

Leigh Tesfatsion
Work by Robert Kalaba on Multicriteria Estimation 159

D. D. Sworder
Hybrid Adaptive Control 173

T. Kailath
Remarks on the Origin of the Displacement-Rank Concept 193

Sueo Ueno
Stochastic Approach to the Cauchy Problem of Linearized
Couette Flow 207

Anthony S. Wexler and Donald J. Marsh
Numerical Methods for Three-Dimensional Models
of the Urine Concentrating Mechanism 219

A. Bardossy, I. Bogardi, and L. Duckstein
Fuzzy Set and Probabilistic Techniques
for Health-Risk Analysis 241

Yin Bai
A Perturbed Collocation Method for Boundary-Value
Problems in Differential-Algebraic Equations 269

S. E. Silliman and A. L. Wright
Generation of Random Fields Characterized
by Discrete Regions of Constant Value 293